

WHAT IS CLAIMED IS:

1. A module for receiving a function circuit, comprising:
2 an input surface acoustic wave circuit, located within said
3 module and couplable to an input of said function circuit, that
4 conditions an input signal provided to said function circuit; and
5 an output surface acoustic wave circuit, located within said
6 module and couplable to an output of said function circuit, that
7 conditions an output signal produced by said function circuit.

2. The module as recited in Claim 1 wherein said function
2 circuit is selected from the group consisting of:
3 a power amplifier,
4 a low-noise amplifier,
5 an intermediate frequency amplifier, and
6 a voltage-controlled oscillator.

3. The module as recited in Claim 1 wherein said output
2 surface acoustic wave circuit impedance-matches said output signal
3 produced by said function circuit.

4. The module as recited in Claim 1 further comprising a
2 common base that supports said input and output surface acoustic
3 wave circuits and said function circuit.

5. The module as recited in Claim 1 further comprising a
2 hermetic enclosure that surrounds said input and output surface
3 acoustic wave circuits and said function circuit.

6. The module as recited in Claim 1 wherein said input and
2 output surface acoustic wave circuits are located on a common
3 piezoelectric substrate.

7. The module as recited in Claim 6 wherein a crosstalk
2 shield is located between said input and output surface acoustic
3 wave circuits.

8. A method of manufacturing a circuit module, comprising:

2 providing a common base;

3 placing an input surface acoustic wave circuit on said common

4 base;

5 placing an output surface acoustic wave circuit on said common

6 base;

7 placing a function circuit on said common base;

8 coupling said input surface acoustic wave circuit to an input

9 of said function circuit to allow said input surface acoustic wave

0 circuit to condition an input signal provided to said function

1 circuit; and

2 coupling said output surface acoustic wave circuit to an

3 output of said function circuit to allow said output surface

4 acoustic wave circuit to condition an output signal produced by

5 said function circuit.

9. The method as recited in Claim 8 wherein said function

2 circuit is selected from the group consisting of:

3 a power amplifier,

4 a low-noise amplifier,

5 an intermediate frequency amplifier, and

6 a voltage-controlled oscillator.

10. The method as recited in Claim 8 wherein said output
surface acoustic wave circuit impedance-matches said output signal
produced by said function circuit.

11. The method as recited in Claim 8 wherein said common base
comprises ceramic.

12. The method as recited in Claim 8 further comprising
forming a hermetic enclosure about said input and output surface
acoustic wave circuits and said function circuit.

13. The method as recited in Claim 8 wherein said input and
output surface acoustic wave circuits are located on a common
piezoelectric substrate placed on said common base.

14. The method as recited in Claim 13 further comprising
forming a crosstalk shield between said input and output surface
acoustic wave circuits.

15. A module, comprising:

a function circuit;

an input surface acoustic wave circuit, located within said module and couplable to an input of said function circuit, that conditions an input signal provided to said function circuit;

an output surface acoustic wave circuit, located within said module and couplable to an output of said function circuit, that conditions an output signal produced by said function circuit; and

an enclosure that surrounds said input and output surface acoustic wave circuits and said function circuit.

16. The module as recited in Claim 15 wherein said function circuit is selected from the group consisting of:

a power amplifier,

a low-noise amplifier,

an intermediate frequency amplifier, and

a voltage-controlled oscillator.

17. The module as recited in Claim 15 wherein said output surface acoustic wave circuit impedance-matches said output signal produced by said function circuit.

18. The module as recited in Claim 15 further comprising a
common base that supports said input and output surface acoustic
wave circuits and said function circuit.

19. The module as recited in Claim 15 wherein said enclosure
is hermetic.

20. The module as recited in Claim 15 wherein said input and
output surface acoustic wave circuits are located on a common
piezoelectric substrate.

21. The module as recited in Claim 20 wherein a crosstalk
shield is located between said input and output surface acoustic
wave circuits.